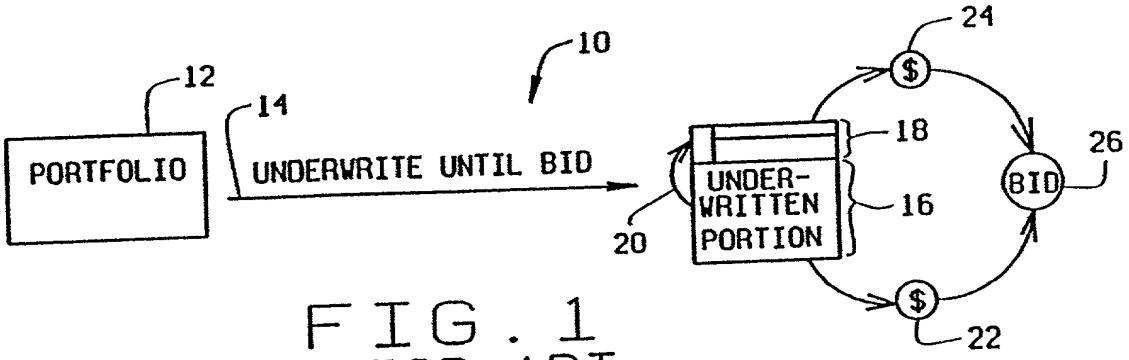


FIG. 1
PRIOR ART

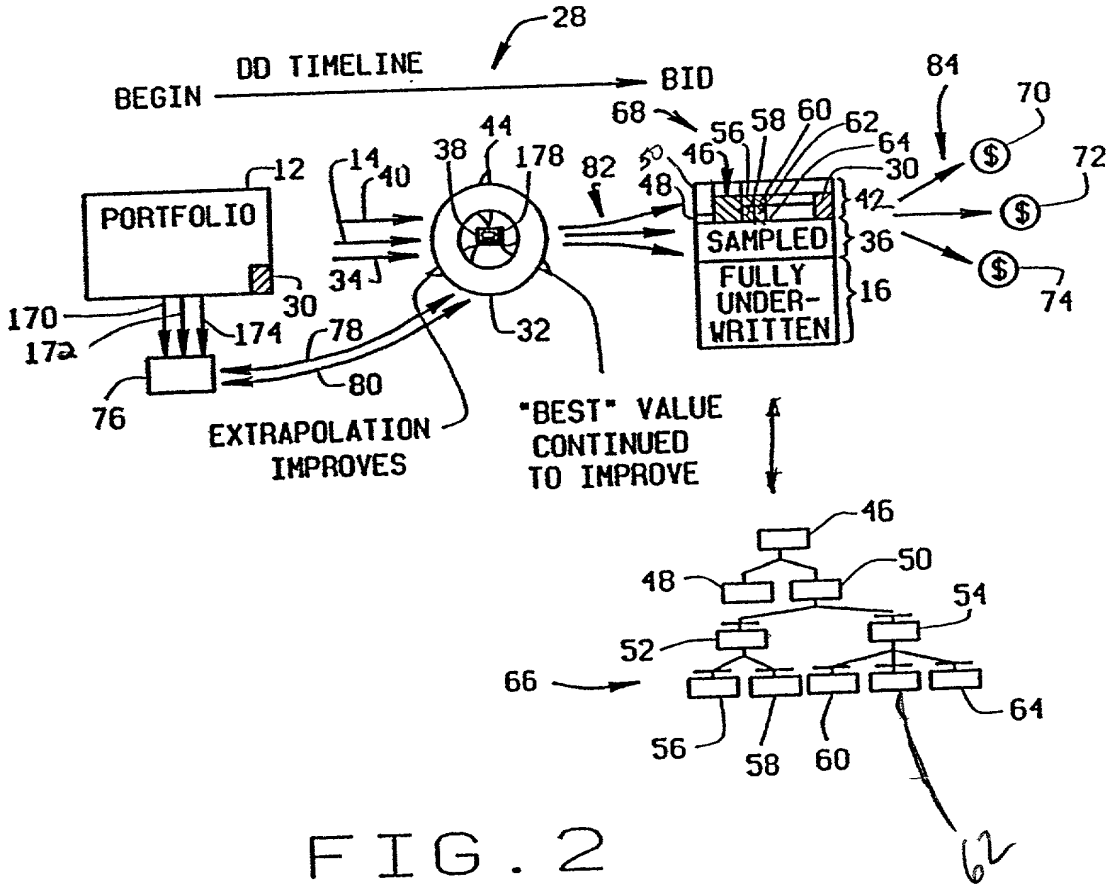


FIG. 2

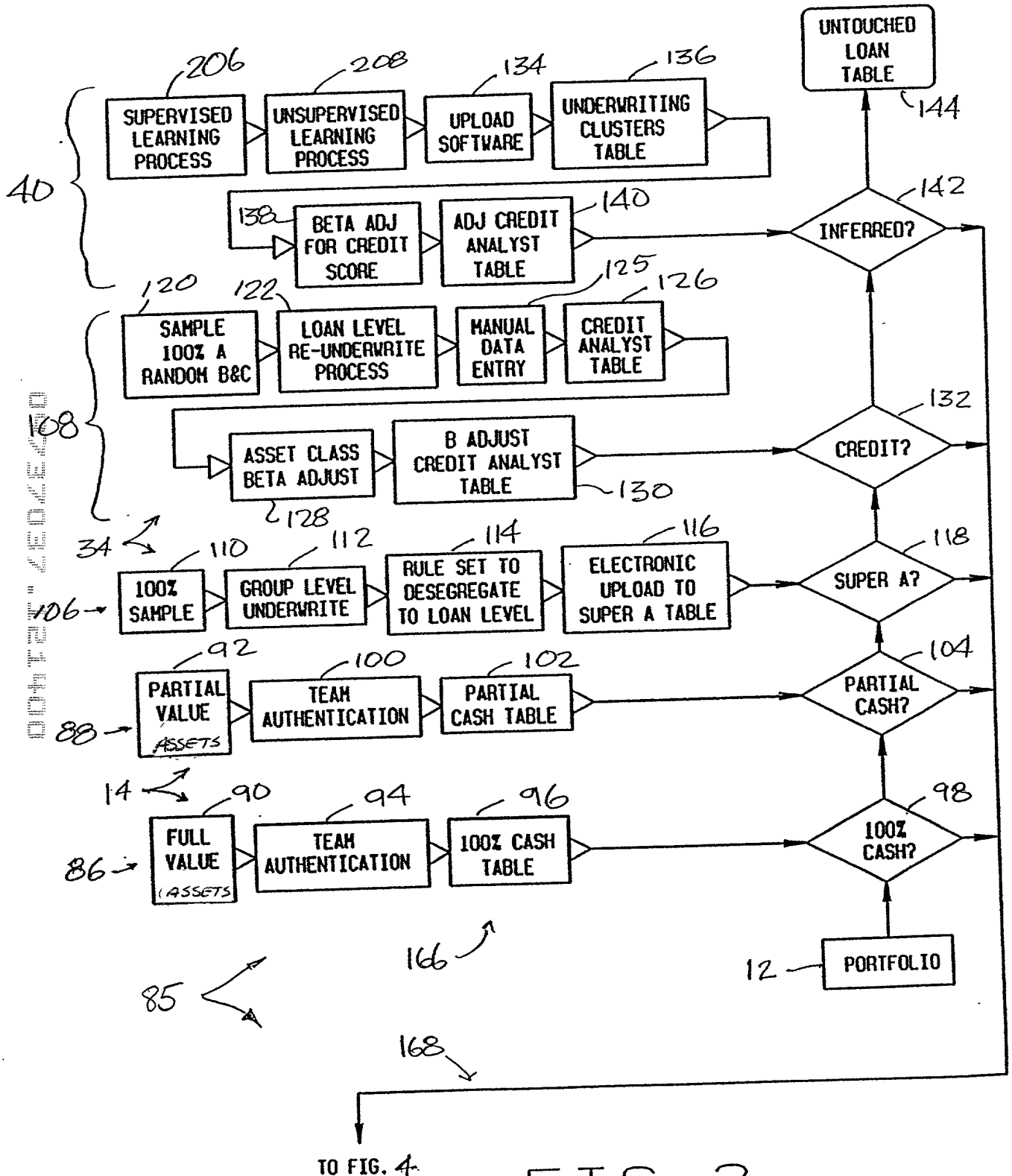

UNTOUCHED LOAN TABLE
144
206
208
134
136
SUPERVISED LEARNING PROCESS
UNSUPERVISED LEARNING PROCESS
UPLOAD SOFTWARE
UNDERWRITING CLUSTERS TABLE
40
138
BETA ADJ FOR CREDIT SCORE
ADJ CREDIT ANALYST TABLE
140
142
INFERRED?
120
122
125
126
SAMPLE 100% A RANDOM B&C
LOAN LEVEL RE-UNDERWRITE PROCESS
MANUAL DATA ENTRY
CREDIT ANALYST TABLE
108
ASSET CLASS BETA ADJUST
B ADJUST CREDIT ANALYST TABLE
130
132
CREDIT?
128
34
110
112
114
116
118
100% SAMPLE
GROUP LEVEL UNDERWRITE
RULE SET TO DESEGREGATE TO LOAN LEVEL
ELECTRONIC UPLOAD TO SUPER A TABLE
SUPER A?
106
92
100
102
104
PARTIAL VALUE ASSETS
TEAM AUTHENTICATION
PARTIAL CASH TABLE
PARTIAL CASH?
88
14
90
94
96
98
FULL VALUE (ASSETS
TEAM AUTHENTICATION
100% CASH TABLE
100% CASH?
86
166
12
PORTFOLIO
85
168
TO FIG. 4

FIG. 3

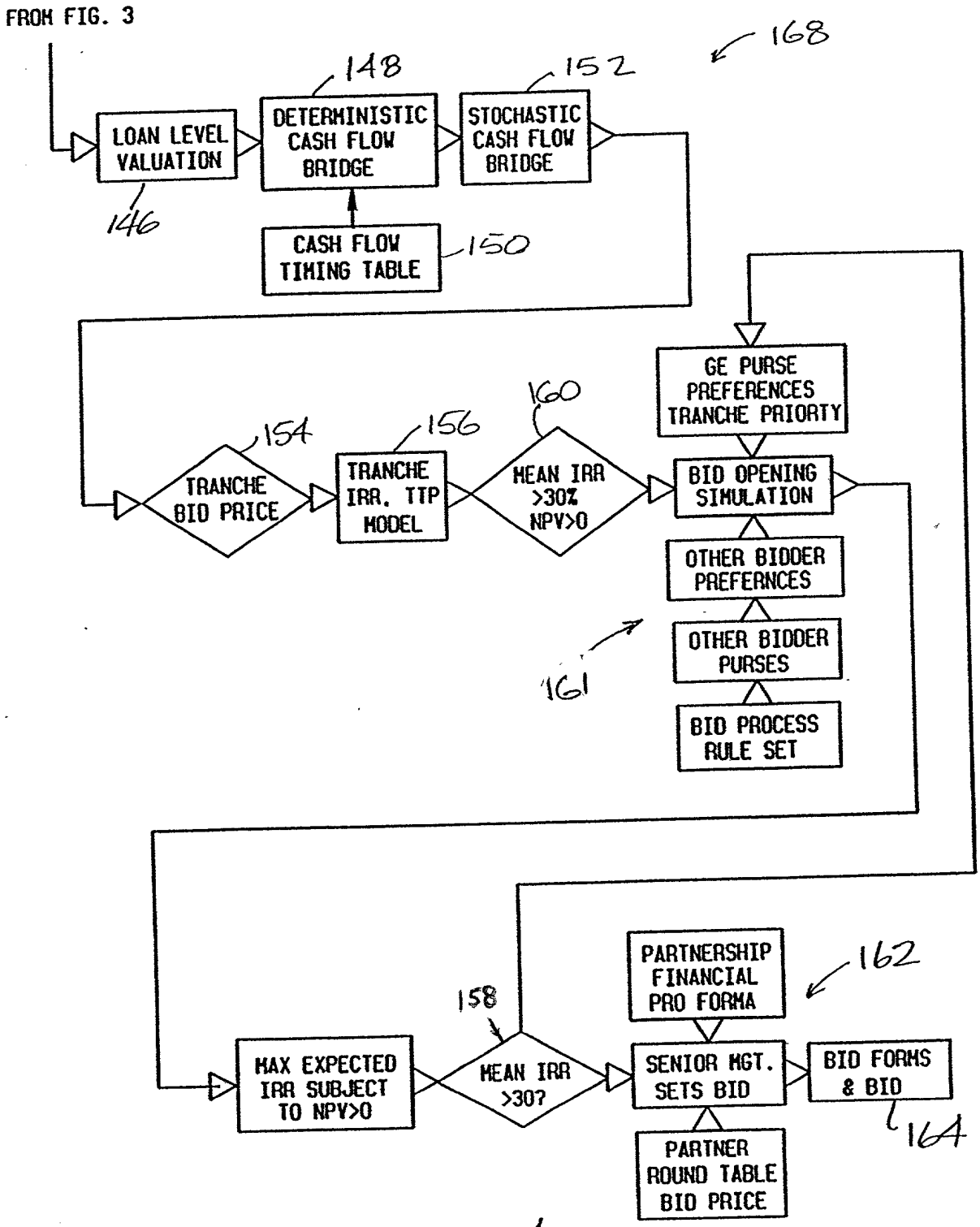

FROM FIG. 3
168
148
152
LOAN LEVEL VALUATION
DETERMINISTIC CASH FLOW BRIDGE
STOCHASTIC CASH FLOW BRIDGE
146
CASH FLOW TIMING TABLE
150
GE PURSE PREFERENCES TRANCHE PRIORTY
160
154
156
TRANCHE BID PRICE
TRANCHE IRR. TTP MODEL
MEAN IRR >30% NPV>0
BID OPENING SIMULATION
OTHER BIDDER PREFERNCES
OTHER BIDDER PURSES
161
BID PROCESS RULE SET
PARTNERSHIP FINANCIAL PRO FORMA
162
158
MAX EXPECTED IRR SUBJECT TO NPV>0
MEAN IRR >30?
SENIOR MGT. SETS BID
BID FORMS & BID
164
PARTNER ROUND TABLE BID PRICE

FIG. 4

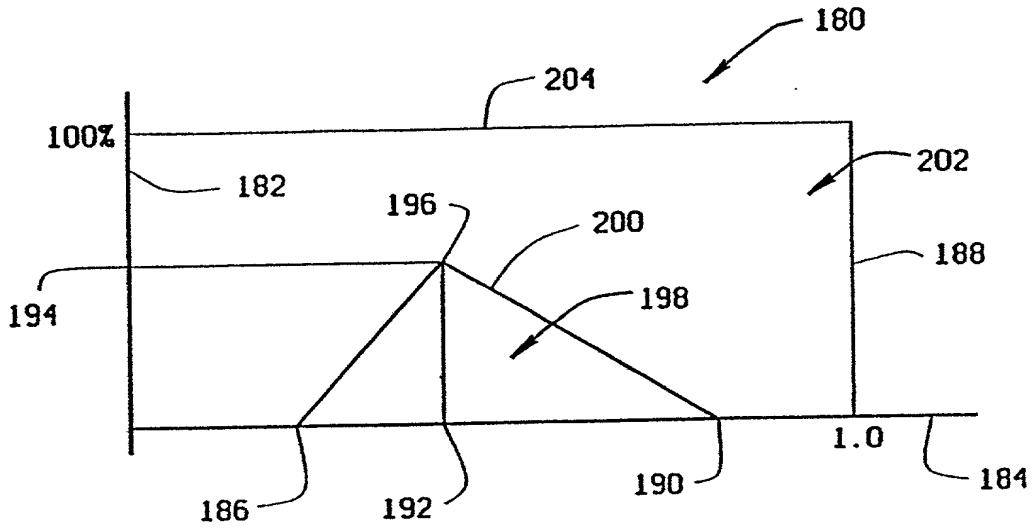


FIG. 5

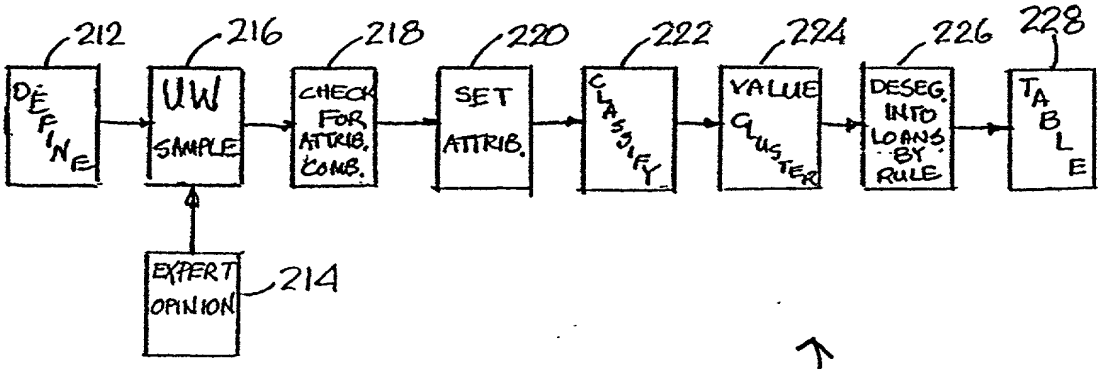


FIG. 6 210

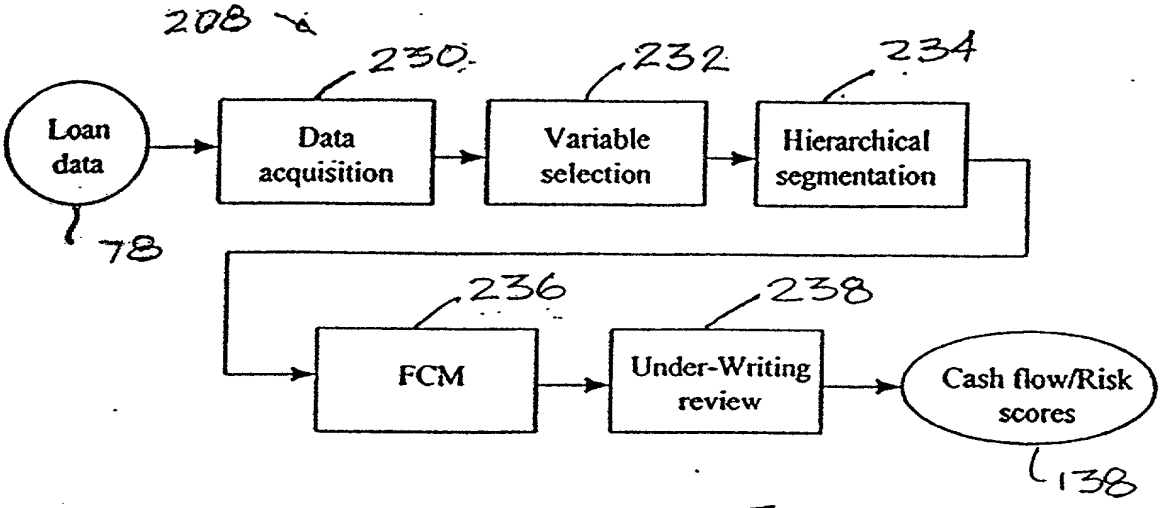

208
230
232
234
Loan data
78
Data acquisition
Variable selection
Hierarchical segmentation
236
238
FCM
Under-Writing review
Cash flow/Risk scores
138

FIG. 7

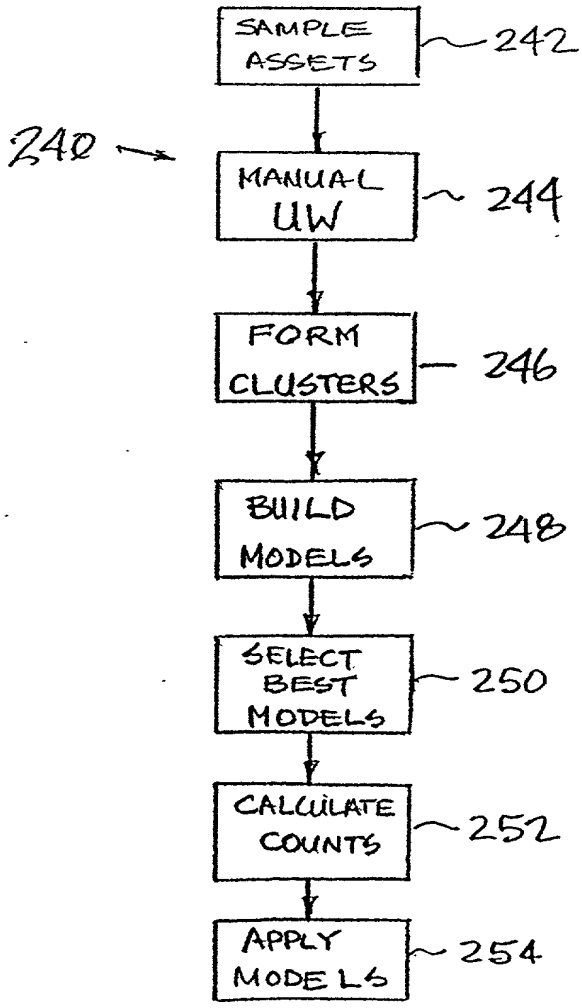

SAMPLE ASSETS
242
240
MANUAL UW
244
FORM CLUSTERS
246
BUILD MODELS
248
SELECT BEST MODELS
250
CALCULATE COUNTS
252
APPLY MODELS
254

FIG. 8

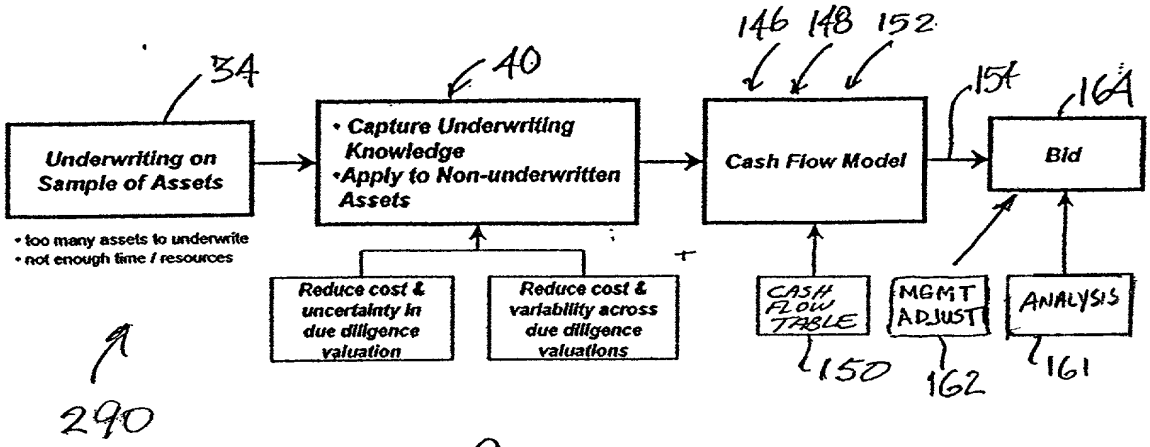


FIG. 9

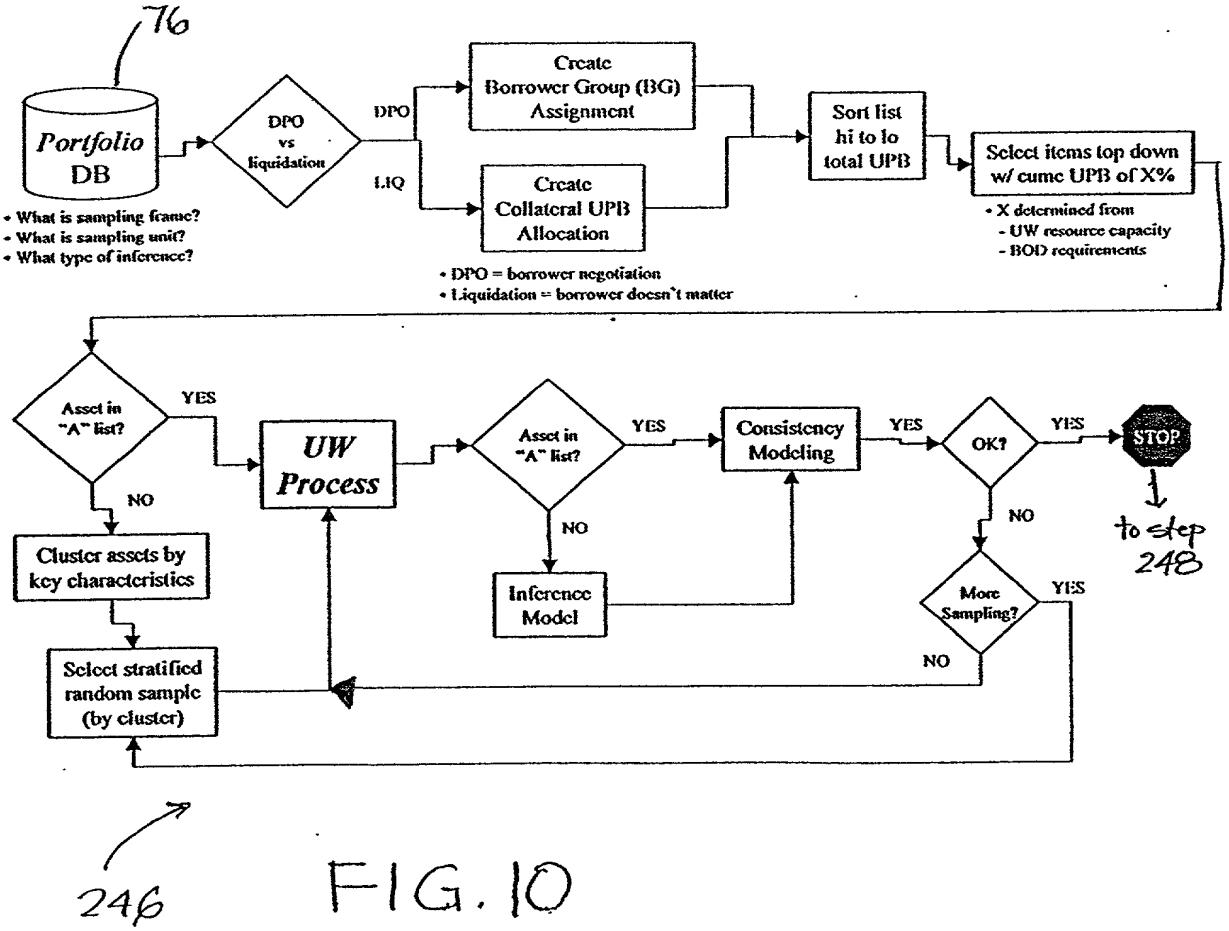
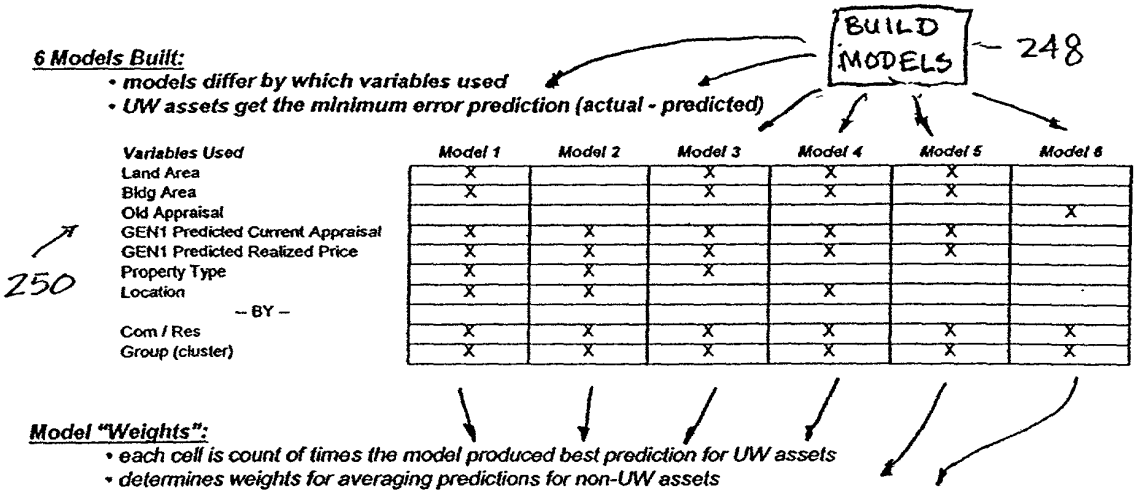


FIG. 10

Attorney Docket No. 08468.0019



Model	Asset Class	Group	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Sum
Court Auction	Commercial	1	13	13	13	8	8	32	87
		2	29	25	29	24	22	19	148
	Total								235
Court Auction	Residential	1	5	5	10	15	4	12	51
		2	4	7	9	3	13	23	59
		3	2	15	11	4	13	8	53
	Total								163
Market Value	Commercial	1	16	13	11	10	15	21	86
		2	29	22	29	27	24	19	150
	Total								236
Market Value	Residential	1	5	8	4	9	11	14	51
		2	8	8	10	0	15	18	59
		3	6	16	5	5	20	2	54
	Total								164

256

258

252

FIG. 11

Variable	Category/Value Range	Encoding Scheme
Loan secured	{Yes, No}	Yes = 1 else 0
Loan type	{Revolving, Non-revolving}	Revolving = 1 else 0
Last payment	[0, 250 MM]	0 if Last payment = 0 else 1
Notice of default sent		Prior to Jun 97 equals 1 else 0
Original maturity date		Prior to Jun 97 equals 1 else 0
Syndicated Loan	{Yes, No}	Yes = 1 else 0
Loan guaranteed	{Yes, No, NAV}	Yes = 1 else 0
Collection score	[0, 1]	
Lien position	{-1, 0, 1}	1 if Lien position = 1 else 0
Current unpaid balance/Original balance	[0, 2.9]	Normalized to [0, 1]
Last payment to Interest/Last payment	[0, 1]	

80

FIG. 12

138

Electronic Acknowledgement Receipt

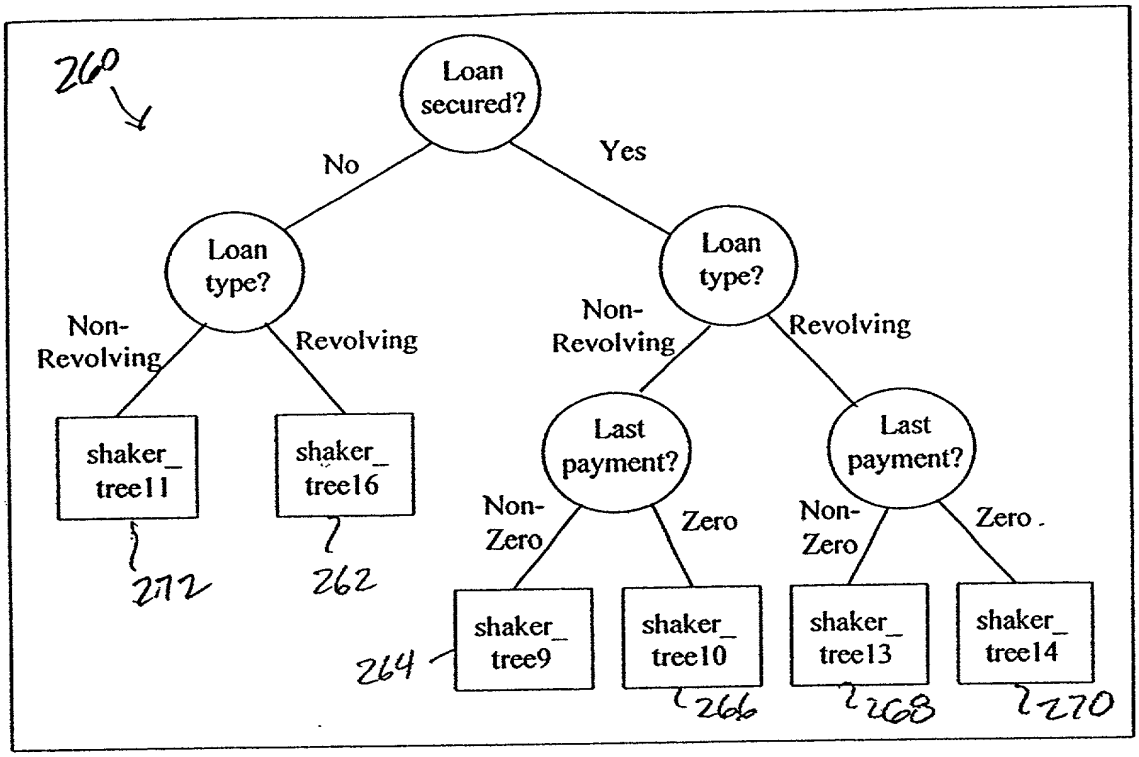
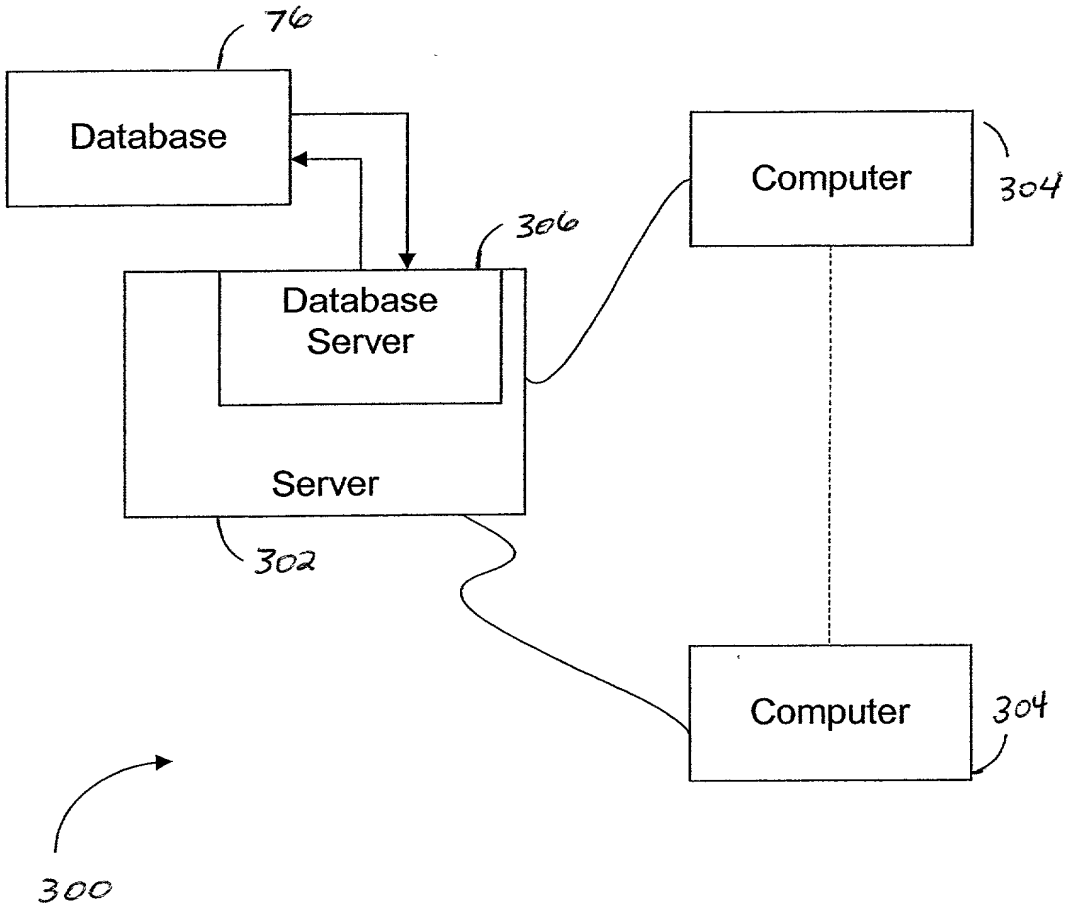

260
Loan secured?
No
Yes
Loan type?
Loan type?
Non-Revolving
Revolving
Non-Revolving
Revolving
shaker_ tree11
shaker_ tree16
Last payment?
Last payment?
Non-Zero
Zero
Non-Zero
Zero
shaker_ tree9
shaker_ tree10
shaker_ tree13
shaker_ tree14
272
262
264
266
268
270

FIG. 13

Figure 9



Docket: 2003-0150